



INDUSTRIAL COMPUTER

RCO-3000-RPL

Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN

Features

- Support 12/13/14th Gen Intel® ADL & RPL S Processor (LGA 1700, 35W TDP)
- Intel® Q670 Express Chipset
- 4x Independent Displays by 4x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE, 3x External SIM socket
- 2x 2.5" SATA SSD Bay (1x Internal) with RAID 0, 1, 5 support
- 1x M.2 E Key, 2230 (PCIe x1, USB 2.0)
- 1x M.2 B Key, 2242/3042/3052 (PCIe x2, or PCIe x1 & USB 3.2 Gen1; Support AI Module/NVMe Storage/4G/5G)
- 1x M.2 B Key, 2242/3042/3052 (PCIe x2 or SATA; Support AI Module/NVMe/SATA Storage/4G/5G)
- 3x RS-232/422/485, 6x USB 3.2 Gen 2 (10 Gbps)
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature (-25°C to 70°C)
- TPM 2.0 Supported



Specifications

System	
Processor	Support 12/13/14th Gen Intel® ADL & RPL S Processor (LGA 1700, 35W TDP)
	- Intel® Core™ i9-14900T/i9-13900TE/i9-12900TE, up to 24 Cores, up to 5.5 GHz
	- Intel® Core™ i7-14700T, up to 20 Cores, up to 5.2 GHz
	- Intel® Core™ i7-13700TE/i7-12700TE, up to 16 Cores, up to 4.8 GHz
	- Intel® Core™ i5-14500T/i5-13500TE/i5-12500TE, up to 14 Core, up to 4.8 GHz
	- Intel® Core™ i3-14100T/i3-13100TE/i3-12100TE, up to 4 Cores, up to 4.4 GHz
	- Intel® Core™ 300T, up to 2 Cores, up to 3.4 GHz
	- Intel® Pentium® G7400TE, 2 Cores, 3.0 GHz
	- Intel® Celeron® G6900TE, 2 Cores, 2.4 GHz
System Chipset	Intel® Q670 Express Chipset
LAN Chipset	2.5 GbE1: Intel I226 (Support Wake-on-LAN and PXE, Support TSN)
	2.5 GbE2: Intel I226 (Support Wake-on-LAN and PXE, Support TSN)
Audio Codec	Realtek ALC888S
System Memory	1x DDR5 4800/5600MHz SODIMM. Max. up to 32GB
Graphics	Integrated Intel® UHD Graphics 770/730
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0
Display	
Display Port	4x DisplayPort, support resolution 4096 x 2304, Up to 7680 x 4320 (1x DP Port Co-layout HDMI Connector)
HDMI	Yes, Shared by 1x DP port
Multiple Display	4x Independent Displays
Storage	
SSD/HDD	1x 9mm 2.5" SATA SSD Bay (Internal)
	1x 7mm 2.5" SATA SSD Bay (Hot-swappable)
	Support RAID 0, 1, 5
Expansion	
M.2	1x M.2 B key Type: 2242/3042/3052
	• Support PCIe x2/PCIe x1 & USB 3.2 Gen1
	• Support NVMe Storage/AI Module/4G/5G
	1x M.2 B key Type: 2242/3042/3052
	• Support PCIe x2/SATA signal
	• Support NVMe/SATA Storage/AI Module/4G/5G
	1x M.2 E key slot (2230)
	• Support PCIe x1 & USB 2.0; Support CNVi
	• Support Wifi Module
SIM Socket	1x External Standard SIM socket
	1x External Dual Nano SIM socket
Expansion Modules	Occupied One Universal I/O Slot:
	• 4-port 1GbE module with Intel® I350 Chipset, RJ-45 or M12 connector (PoE optional)
	• 2-Port 10GbE RJ45 with Intel X710 Chipset
	• 4-Port USB with Renesas uPD720201K8 host controller (share PCIe Gen2 x1 bandwidth)
	• 1x RJ45 port for OOB Management Module (optional)
	• 1x M.2 M-Key (PCIe x4 Lane, 2242/2260) for NVMe/AI Module
	• 2x M.2 B-Key 2242/3042/3052:
	- 2x M.2 (PCIe x2 Lane) for NVMe/AI Module
	- 1x M.2 (PCIe x2 Lane) for NVMe/AI Module and 1x M.2 (PCIe x1 Lane + USB 3.2 Gen 1) for 4G/5G Module, 1x External SIM socket (M.2 attached)

I/O	
Audio	1x Line-out
CAN	2x CAN 2.0 A/B 2-pin Internal header
COM	3x RS-232/422/485 (Optional Isolation)
DIO	8 in / 8 out (Isolated)
LAN	2x RJ45
OOB	1x RJ45 (OOB Module through EBIO bracket, optional)
USB	6x USB 3.2 Gen 2 (10Gbps)
Others	5x WiFi Antenna Holes
	1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off
	1x PC/Car Mode Switch, 1x Delay Time Switch
	1x Clear CMOS Switch
	1x Mic In Header (Internal)

Operating System	
Windows	Windows 10
Linux	Linux kernel 5.x
Power	
Power Adapter	Optional AC/DC 24V/9.2A, 220W
	Optional AC/DC 24V/11.67A, 280W
Power Mode	AT, ATX
Power Ignition Sensing	Power Ignition Management
Power Supply Voltage	9~48VDC
Power Connector	3-pin Terminal Block
Power Protection	OVP (Over Voltage Protection)
	OCF (Over Current Protection)
	Reverse Protection

Environment	
Operating Temperature	-25°C to 70°C (35W CPU)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	UL, CE, FCC Class A, EMC Conformity with EN50155 & EN50121-3-2
Vibration	IEC60068-2-64:2008
	With HDD: 1 Grms (5 - 500 Hz, 0.5 hr/axis)
	With SSD: 5 Grms (5 - 500 Hz, 0.5 hr/axis)
	Designed to comply with MIL-STD-810G Method 514.7 Procedure I
Shock	IEC60068-2-27:2008
	With SSD: 50G half-sin 11ms
	Designed to comply with MIL-STD-810G Method 516.7 Procedure I

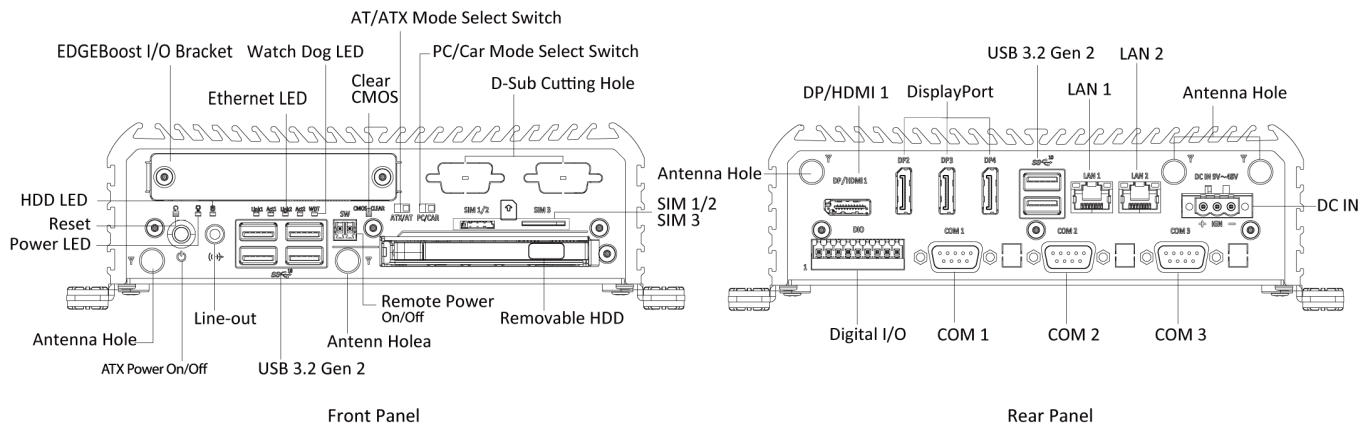
Physical	
Dimensions	192 (W) x 227 (D) x 60.3 (H) mm
Weights	2.8kg - 3.6 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting kit with Vibration Isolation
	DIN Rail Mounting (optional)

- For 14th CPUs configured to run at 35W, operating temperatures will be limited to 60°C.
- 35W CPUs may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon. Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded engineers for the best configuration to match your application requirements.
- All specifications and photos are subject to change without notice.

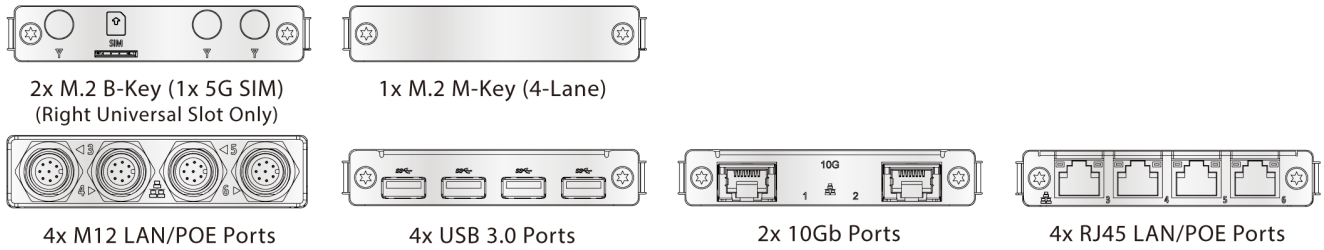


RCO-3000-RPL

External I/O Mechanical Layout

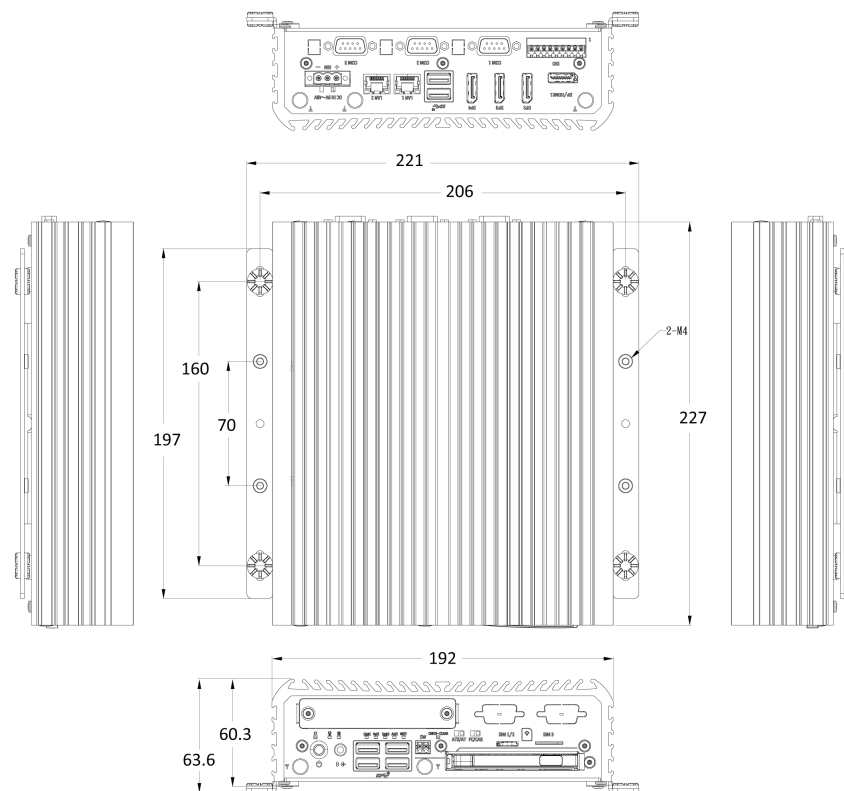


Available EDGEBoost I/O



Dimension

Unit: mm





RCO-3000-RPL

Available Models

Model No.	Description
RCO-3000-RPL	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN
RCO-3000-RPL-4L	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 6x LAN
RCO-3000-RPL-4LM12	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 4x M12 LAN
RCO-3000-RPL-4P	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 4x PoE
RCO-3000-RPL-4PM12	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 4x M12 PoE
RCO-3000-RPL-D10G	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 2x 10G LAN
RCO-3000-RPL-4U3	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 10x USB
RCO-3000-RPL-2M2BK	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 3x M.2 B-Key
RCO-3000-RPL-M2MK	Small Form Factor Computer with LGA 1700 for 12/13/14th Gen Intel CPU & Q670 PCH, 2x LAN, 1x M.2 M-Key

Optional Accessories

Model No.	Description
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22801	Adapter AC/DC 24V 11.6A 280W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

Packing List

- 1x RCO-3000-RPL
- 1x Wall Mounting kit with Vibration Isolation
- 1x Accessory Kit



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Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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